IN THE SPECIFICATION:

Page 1, after the title, please insert the following paragraph:

This application is a continuation of international application PCT/JP02/04327, filed on April 30, 2002.

In the Specification

Please **DELETE** the Abstract of the Disclosure in its entirety and substitute therefor the following Abstract.

ABSTRACT

An electron beam apparatus including an electron gun for directing a plurality of primary electron beams onto a sample, an objective lens for forming an electric field to accelerate a plurality of secondary electron beams emitted from the sample, and a separator for separating the plurality of secondary electron beams from a primary optical system and for directing the plurality of secondary electron beams into a secondary optical system for guiding to a detector outputting a detection signal of the secondary electron beams. A deflector deflects the secondary electron beams in the secondary optical system. The deflector is controlled to deflect the plurality of secondary electron beams synchronously with scanning of the plurality of primary electron beams, thereby preventing the plurality of secondary electron beams from moving on the detector in response to the scanning of the plurality of primary electron beams.

SPECIFICATION

ELECTRON BEAM APPARATUS AND DEVICE MANUFACTURING METHOD USING SAME

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TC-11/22/06

TECHNICAL FIELD

The present invention relates to a multi-beam type electron beam apparatus, and a semiconductor device manufacturing method which uses such an apparatus to evaluate wafers in the middle of processes for improving the yield. More particularly, the present invention relates to improvements on the configuration of a secondary optical system, a cathode, and an electron gun of a multi-beam type electron beam apparatus.

BACKGROUND ART

Generally, when aberration of an optical system must be limited to a certain value or lower, the optical system is provided with a diaphragm such that the aperture diameter of the diaphragm is adjusted to make the optical system brighter or to improve the resolution of the optical system. Also, when a plurality of beams are handled, a diaphragm is provided at a position at which a principal ray of the plurality of beams intersect with each other, i.e., a cross-over position in a primary optical system.

As described above, while a diaphragm is provided at a cross-over position in a primary optical system for handling a plurality of beams, problems described below arise if the diaphragm is provided in a secondary optical